0.75 / 1.0 METER PES
POLE MOUNT
(Round Foundation)

CONSTRUCTION DOCUMENT POLE 0.75/1.0-R

15 August 1994

PAGES 1 THRU 7

HUGHES
NETWORK SYSTEMS

Subsidiary of
Hughes Aircraft Company

Step 1. Determine Required Pole Height

It is the Contractor's responsibility to determine the required pole height based on any applicable site specific data. This data includes, but is not limited to, building height, roof slope, required look angle to all satellites (including backups), all site obstructions (trees, buildings, air handlers, etc.). The maximum height shown below is from the ground surface, not the top of concrete, to the top of the pole. Mast reducer height, if pole size exceeds 2-7/8 inch, is a part of the total height.

Pole size is not a function of the wind zone for the site. It is controlled by HNS deflection tolerances and beam pointing error. The pole size must be determined first.

Maximum Height	Required Pole Size
5' - 0"	2 1/2 STD 2 - 7/8" O.D. Schedule 40
11' - 0"	4 STD 4 - 1/2" O.D. Schedule 40
14' - 0"	5 STD 5 - 9/16" O.D. Schedule 40
17' - 0"	6 STD 6 5/8" O.D. Schedule 40
29' - 0"	8 STD 8 - 5/8" O.D. Schedule 40
44' - 0"	10 STD 10 3/4" O.D. Schedule 40

Table 1: Pole Size - 0.75 / 1.0 M Antenna

Step 2. Determine Required Foundation Size

The foundation size, either round or square, is based on the pole size, selected in Step 1 above, and the wind zone for the specific site. Wind zone requirements can be a function of the national data available on the wind speed maps, local building codes and ordinances, and landlord requirements. Typically the most severe (highest speed) should be chosen.

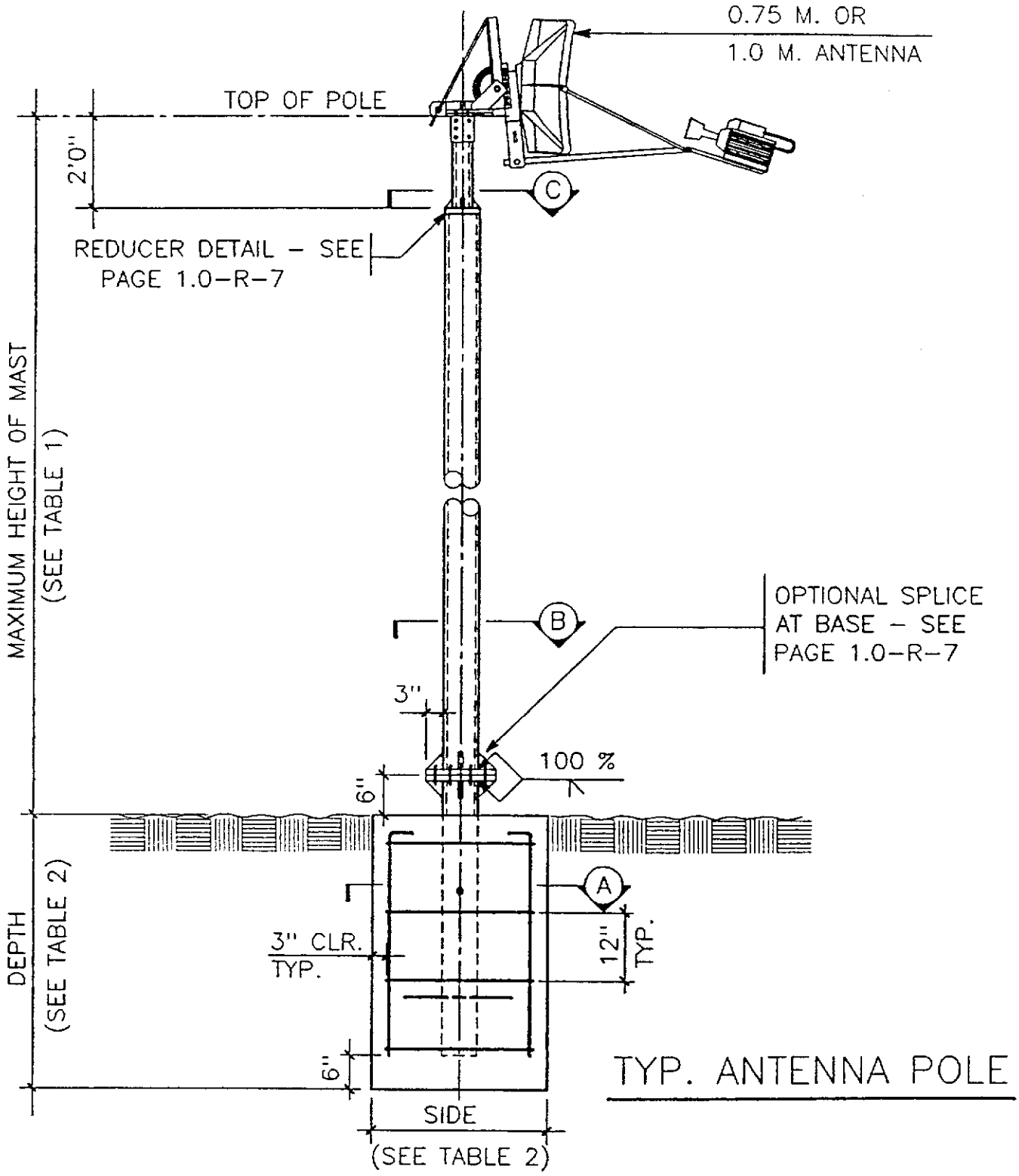
Note specifically that frost depth was NOT considered in the creation of the data below. Overall foundation depth must be increased as required to meet local frost depth requirements.

Wind / Pole	70 mph	80 mph	90 mph	100mph	110mph	125mph
2 1/2 STD	1'-6" Diam 2'-0" Deep	1'-6" Diam 2'-0" Deep	1'-6" Diam 2'-6" Deep	1'-6" Diam 2'-6" Deep	1'-6" Diam 3'-0" Deep	1'-6" Diam 3'-0" Deep
4 STD	1'-6" Diam 2'-6" Deep	1'-6" Diam 3'-0" Deep	1'-6" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 4'-0" Deep
5 STD	2'-0" Diam 3'-0" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 4'-0" Deep	2'-6" Diam 4'-0" Deep	2'-6" Diam 4'-0" Deep
6 STD	2'-6" Diam 3'-6" Deep	2'-6" Diam 3'-6" Deep	2'-6" Diam 4'-0" Deep	2'-6" Diam 4'-6" Deep	2'-6" Diam 5'-0" Deep	2'-6" Diam 5'-0" Deep
8 STD	2'-6" Diam 4'-6" Deep	2'-6" Diam 4'-6" Deep	2'-6" Diam 5'-0" Deep	2'-6" Diam 5'-0" Deep	3'-0" Diam 5'-0" Deep	3'-0" Diam 5'-0" Deep
10 STD	2'-6" Diam 5'-0" Deep	2'-6" Diam 5'-6" Deep	3'-0" Diam 5'-6" Deep	3'-0" Diam 5'-6" Deep	3'-0" Diam 6'-0" Deep	3'-0" Diam 6'-0" Deep

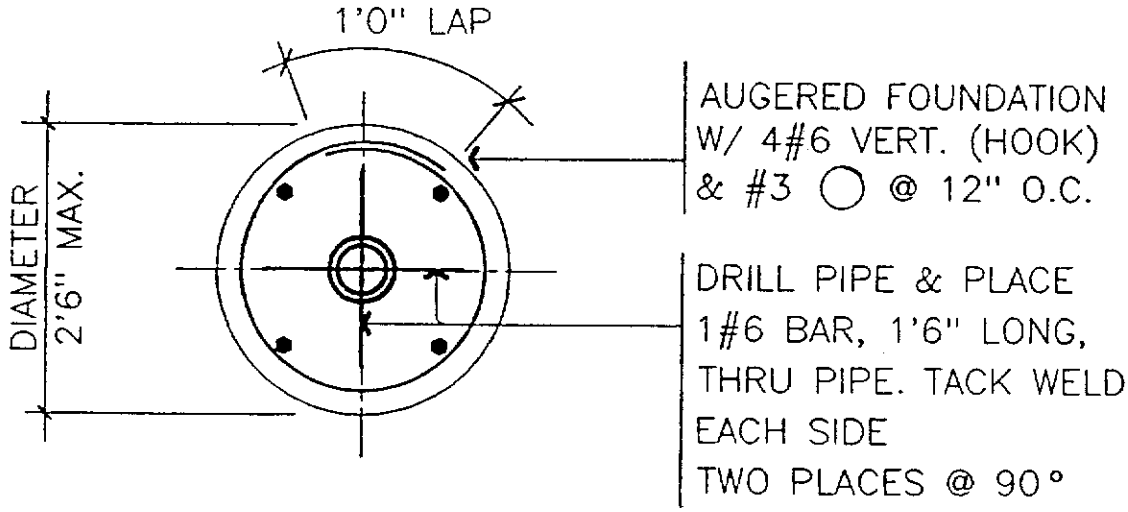
Table 2: Foundation Size - 0.75 / 1.0 M Antenna

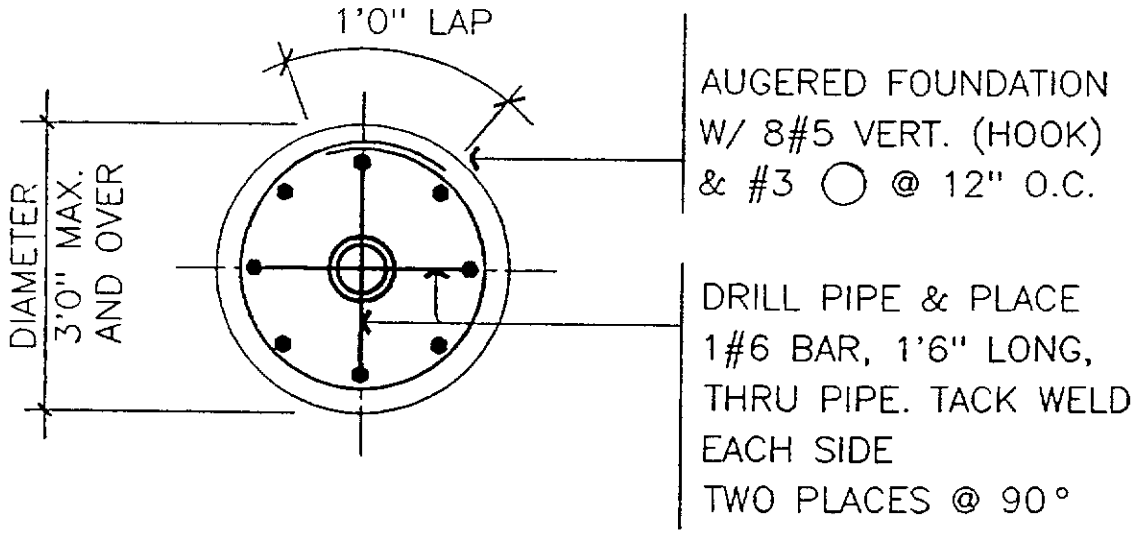
Wind / Pole	70 mph	80 mph	90 mph	100mph	110mph	125mph
2 1/2 STD	2'-0" Diam 2'-0" Deep	2'-0" Diam 2'-0" Deep	2'-0" Diam 2'-6" Deep	2'-0" Diam 2'-6" Deep	2'-0" Diam 3'-0" Deep	2'-0" Diam 3'-0" Deep
4 STD	2'-0" Diam 2'-6" Deep	2'-0" Diam 3'-0" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 4'-0" Deep
5 STD	2'-0" Diam 3'-0" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 4'-0" Deep	2'-0" Diam 4'-6" Deep	2'-0" Diam 5'-0" Deep
6 STD	2'-0" Diam 3'-6" Deep	2'-0" Diam 3'-6" Deep	2'-0" Diam 4'-0" Deep	2'-0" Diam 4'-6" Deep	2'-0" Diam 5'-0" Deep	2'-0" Diam 6'-0" Deep
8 STD	2'-0" Diam 4'-6" Deep	2'-0" Diam 4'-6" Deep	2'-0" Diam 5'-0" Deep	2'-0" Diam 5'-6" Deep	2'-0" Diam 6'-6" Deep	2'-0" Diam 7'-0" Deep
10 STD	2'-0" Diam 5'-0" Deep	2'-0" Diam 5'-6" Deep	2'-0" Diam 6'-0" Deep	2'-0" Diam 6'-6" Deep	2'-0" Diam 76'-0" Deep	2'-0" Diam 7'-6" Deep

Table 2A: Foundation Size - 0.75 / 1.0 M Antenna
Alternate - 2'-0" Diameter Auger



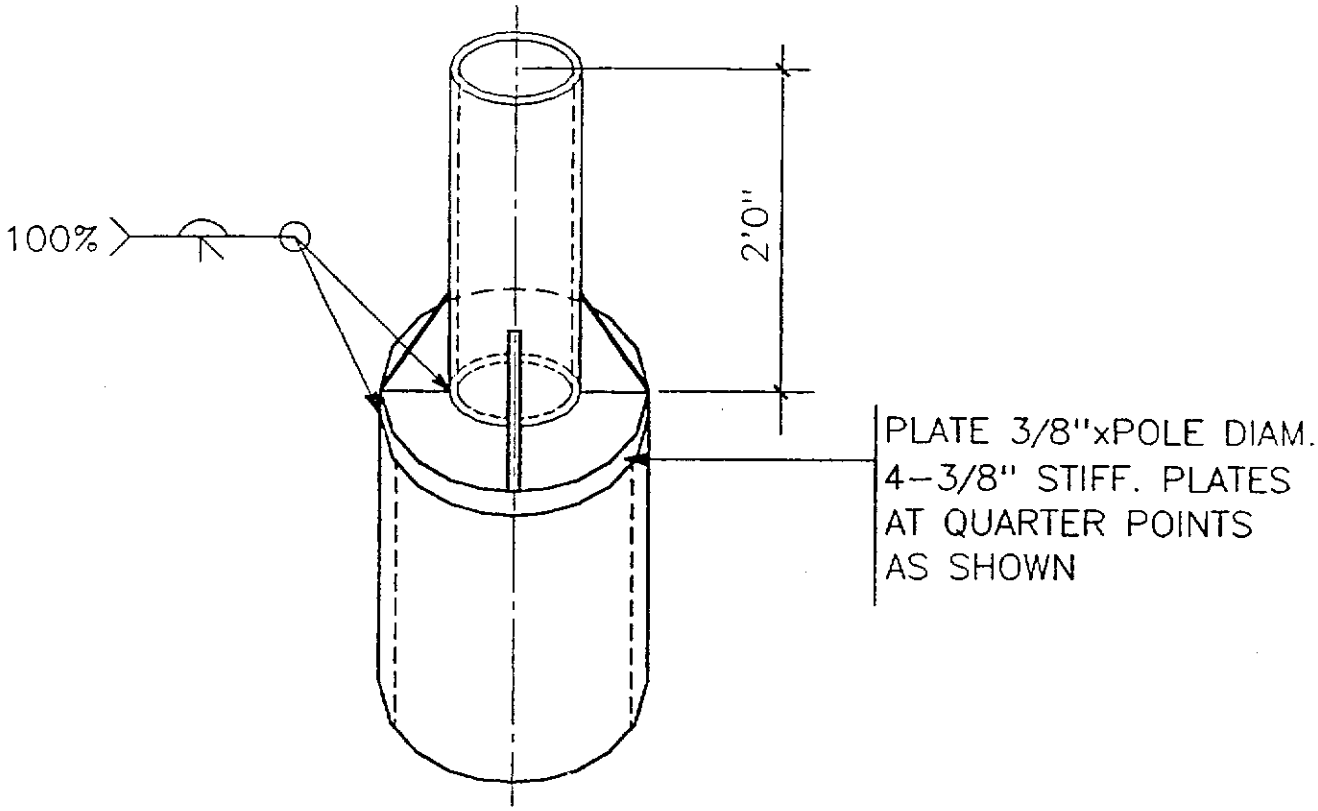
TYP. ANTENNA POLE





SECTION B

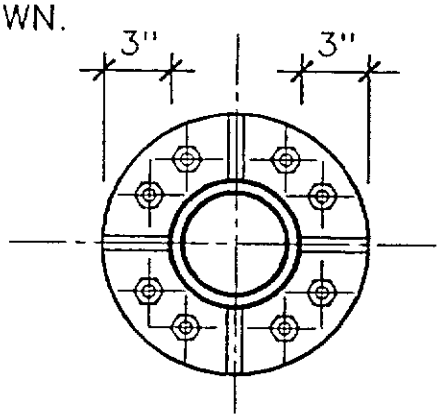
FOUNDATION PLAN



SECTION C

MAST REDUCER (IF REQ'D)

PLATE 3/4" x DIA. AS REQ'D W/
8–3/4" ϕ A325 H. S. BOLTS – PROVIDE
4 – 3/8" STIFF. PLATES AT QUARTER POINTS
AS SHOWN.



SECTION B

(OPTIONAL POLE BASE DETAIL)

NOTE:

POLE CAN BE ERECTED IN ONE PIECE WITHOUT SPLICE AT BASE AT CONTRACTOR'S OPTION.